

Municipal Bonds as a Financial Component of the Development of Territorial Communities in Ukraine

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ABSTRACT

The world economic thought has a number of tools, the use of which helps attract financial investment and helps accumulate additional funds for infrastructure and social projects of municipalities. The issue of municipal bonds as a financial component of the development of territorial communities is considered vital for this research in which the factors that determine the ability to borrow are highlighted. The advantages and disadvantages of using municipal bonds by local governments are also identified. It is realized that the world experience in the application of municipal bonds is contradictory and ambiguous. It is established that the best results from the use of bonds have been the municipalities of countries with a high level of development and municipal management, which determines the demand for this type of securities from investors. The use of municipal bond in countries with economies in transition has led to a number of municipal defaults, resulting in severe restrictions on their issuance by central authorities. The united communities of Ukraine require additional financial resources. Smaller municipalities are characterized by a high rate of budget subsidies and low average income per community. Ukrainian territorial communities' municipal bonds are used insufficiently in comparison to developed industrial countries. Factors that shape the risks of implementing a system of local borrowing in Ukraine are identified and include lack of recognition and registration of local governments as legal entities under public law, imperfection of legislation, lack of experience in local borrowing, lack of clear information about the available resources of local communities and their valuation.

Keywords: Financial resources; Municipal bonds; Territorial communities; Securities; Financial market

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1. INTRODUCTION

The active phase of implementation of decentralization reform in Ukraine is accompanied by a number of challenges and uncertainties. A typical problem of municipalities in developing countries is their issues surrounding the financial security, weak fiscal base, low creditworthiness, and lack of experience in fulfilling their debt obligations, which leads to the search for ways to solve the financial crises.

The relevant economic theory tends to show developments concerning the municipal loan market, the main component of which is the issuance of debt obligations by municipalities in the form of bonds. Their issuance allows to provide local territorial communities with the additional financial resources enabling the implementation of socio-economic and infrastructural programs on the ground. In practice of local governance of Ukraine, municipal bonds have not received due attention and are characterized by low quotations compared to other types of loans. However, statistics show a fairly high level of popularity of this type of securities worldwide among a wide range of investors. Given that the decentralization of power in Ukraine should result into a new economic base for the development of its regions, an important aspect of solving a number of problems. It pertains to the creation of an effective financial market system in which municipal bonds can occupy a niche.

With the above backdrop, purpose of this article is to highlight trends of and prospects for the municipal bonds as a source of financial pool for strengthening the local governance and delivering development good.

2. REVIEW OF LITERATURE

The issues related to municipal bonds are reflected in the works of many scholars. In particular, Howard (2020) emphasizes on municipal bonds and identifies their types and characteristics as collateral. Kopanyi (2018) explores the issues of bond issuance, their financial security and the definition of prohibitions and restrictions on their issuance, which are specific to individual countries. Roberts (2020) highlights the impacts of pandemic on the financial condition of companies and governments, arguing that the world expects significant depressions and predicts the negative development of financial markets. Ukrainian researchers, in particular, Rekunenko (2014), Savenko (2020), Iorgachova and Kovalova (2019) indicate need of the development of the infrastructure of financial market in Ukraine and note the urgent need for infrastructure modernization and its harmonization with international standards. Scientific research by Zolotukhin (2017) highlights international experience of the functioning of local borrowing markets and how those conclusions can be adapted in Ukraine.

3. RESULT AND DISCUSSION

Aware of the existing scientific developments, authors believe that in-depth research requires finding the optimal concept of financing and raising funds in modern scenario from the standpoint of the use of municipal bonds by local governments.

What are the characteristics and global trends of municipal bonds? A significant growth in the municipal bond market occurred in the 1990s. It was triggered by the high rate of urbanization in Latin America and other developing regions. During this period, many municipalities issued bonds to ensure the inflow of financial resources and refinancing. The process at that time ended in municipal and regional defaults, forcing national governments to absorb municipal debts and increase public debt. As a result, many countries have legally banned or severely restricted the borrowings. In table 1 are summed up some generalized restrictions on borrowings.

As evident from the experience of many countries around the world, not all local governments can issue bonds. Exceptions to the rules are municipalities with significant investment programs and good ratings. For small municipalities, loans from commercial banks may be the best alternative. Important in this analysis of debt capacity is the question of whether local authorities will be able to pay outstanding and new debt on time. In this regard, the following factors that determine the ability to borrow should be considered: the prospects of the municipality (economic and financial); offer of new loans or bonds, which includes the amount of interest, form, maturity; existing debt obligations, their structure and size; and the presence of restrictions at the national or regional level. The significant attractiveness in the financial market of municipal bonds issued by the cities of South Africa should be noted. These are cities

that carry out effective budget management. Municipal bonds are often attractive to investors looking to reduce income tax bills. Usually, the payment of interest on them is exempt from federal tax. These securities are used by local and State authorities in order to create a positive environment for financing government projects or municipal governments: construction of schools, roads, repairs, etc.

Table 1: Municipal loan aspects of individual countries

<i>Country</i>	<i>Fiscal base</i>
Austria	Borrowing is allowed only to cover extraordinary expenses.
Brazil	Annual targets of income, expenses, primary balance changes in debt composition. Failure to comply with fiscal targets leads to sanctions and high risks for officials.
Colombia	Loan permission depends on the rating territorial governments based on liquidity ratios and solvency.
Czech Republic	No obvious restrictions.
Finland	Borrowings are coordinated by municipal organizations and are not guaranteed by the State.
France	Loans are allowed to finance capital investments in the absence of an operating deficit.

Source: Kopanyi (2018)

Municipal bonds are divided into two categories: general obligation bonds (GOs) and income bonds. The difference is in providing them. The first is provided by the total income of the issuing municipality, and the second is supported by a specific source of income. GOs account for 28% of the investment market and are issued by most local governments to fund the specific projects. The characteristics and types of GO bonds are illustrated in table 2.

Table 2: Types and characteristics of GO bonds

<i>Types of bonds</i>	<i>Characteristics of collateral</i>
GO is supported by unrestricted tax regulation and special tax	Secured by property tax, they can be supported by other taxes or state support. These bonds are a very strong collateral.
GO is supported by without special tax	They are provided with the general income of the issuer, including taxes, but do not have a clearly defined tax from which they must return. Bondholders are paid out of total income, and if they are insufficient to cover debt service, the issuer usually has to raise taxes. These bonds are a strong collateral.
GO is supported by limited tax regulation	Provided by the general income of the issuer, including taxes. However, the issuer does not have the opportunity to increase taxes for an unlimited amount to return the bonds. The limit on the amount of tax increase allowed is usually described in the bond supply report, and the bonds are clearly marked. Bonds are strong collateral, but tax restrictions reduce their security.

Source: Kopanyi (2018)

The advantages of municipal bonds include receiving money in advance, long term commercial banking, income stability and cheaper resources. The main disadvantages of bonds are the complexity of the preparatory process for the issue, as well as the high cost of service and implementation. It should be noted that there are different degrees of State control over the debt policy of local governments (Zolotukhin, 2017), dialogue-oriented cooperation (coordination of control over borrowing), regulatory (formation of fiscal rules to limit local debt), administrative (central government manages local debt). Municipal bonds are common in the United States, and bank loans predominate in Europe. The composition of creditors also differs. In the United States, investors in municipal securities are households, whereas in Europe (including Ukraine), local governments are credited with funds from financial institutions. In order to determine the volume of municipal bond issues, we use the data in table 3.

Table 3: Dynamics of the issue of US municipal bonds, \$ billion

<i>Bond Type</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>The relative deviation of 2020 from 2011, %</i>
GO	106	136	128	136	159	179	165	124	164	200	189
Revenue	189	247	208	203	246	272	284	223	263	285	151
Average maturity, years	15.5	15.6	16.2	16.0	16.4	16.8	17.5	18.1	18.1	17.4	112.2

Source: US Municipal Bonds Statistics

These statistics indicate a significant increase in the issuance of municipal bonds in the United States. In terms of total liabilities, GO bonds during the period of study increased by 89%, income bonds by 51% (refer Table 3). It should be noted that the issue of yield bonds, which have a higher risk of default over time, but provide a higher rate of return for investors, significantly exceeds the issue of GO. In addition, the average maturity of securities increased by 12.2% (Table 3). Municipal bonds can be purchased by individual investors both through an organization that issues securities and through a mutual fund. The results described by Horton (2020) were used giving 5 highest ratings of municipal funds, which were relevant in December 2020 (Table 3).

Table 4: The highest rated funds of municipal bonds

<i>Name of the fund</i>	<i>Characteristic features</i>
American High-Income Municipal Bond Fund	Much of the assets (\$ 7.8 billion) are invested in debt bonds of city bonds. It has a 10-year annualized yield of 5.46%. The cost ratio of the mutual fund is 0.67% with advance sales of 3.75% when buying shares. The minimum investment is \$ 250.
Nuveen High Yield Municipal Bond Fund I	It invests at least 80% of the mutual fund's assets in municipal bonds. It brings a 10-year yield of 6.62% per annum. The mutual fund has a cost ratio of 0.99%. It targets at investors with higher net worth, with an initial investment of \$ 100.000.
Vanguard Intermediate-Term Tax-Exempt Fund Investor Shares	It is one of the longest mutual funds of municipal bonds in the market. It invests at least 75% of its \$ 78.2 billion in municipal bonds. The weighted average maturity is 6 to 12 years. 10-year profitability is 3.59% with a low-cost ratio of 0.17%. The initial investment required is \$ 3.000.
T. Rowe Price Maryland Tax-Free Bond Fund	It invests in at least 80% of assets in debt securities. It brings a 10-year annual return of 3.78% at a cost ratio of 0.48%. The initial investment required is \$ 2.500.
Oppenheimer Rochester High Yield Municipal Fund Class A	It invests at least 80% of its net assets in high-yield municipal bonds issued throughout the United States. 10-year yield is 6.89%. The cost ratio of the mutual fund is 0.95%, and total sales are 4.25%. The initial investment required is \$ 1.000.

Source: Horton (2020)

A common feature of these funds is that they provide investors with a high level of current income, which is exempt from the regular federal income tax and has a fairly high annual rates, which determines their attractiveness. Roberts (2020) in his study suggests that, in a crisis caused by a pandemic, cheap loans may be a thing of the past, despite attempts by the Federal Reserve. The world is facing a wave of debt default, which will have a negative impact on financial markets.

3.1 Features of Transformations in Ukraine

Decentralization reform in Ukraine has revealed rather acute social problems and contradictions. Undoubtedly, those territorial communities that have significant economic potential have found themselves in better conditions and will be able to achieve good financial results with the right organization of their management activities. A major problem today is that these entities have low infrastructure development, low index of financial capacity, and, consequently, insufficient working capital, which should be attracted in order to strengthen the competitive position of the community.

The conclusions of scientists Rekunenko (2014), Savenko (2020), and Iorgachova and Kovalova (2019) is logical in the sense that the financial market of Ukraine and its infrastructure must be modernized in accordance with international standards. At the same time, the creation and development of financial market infrastructure should be accompanied by the formation of its own development concept with appropriate mechanisms for implementing strategic and tactical objectives. An important issue concerning the study of municipal bonds and the opportunities or challenges that may arise from their issuance and implementation in financial markets, is to identify the financial preconditions of the newly formed united communities and the feasibility of attracting this type of financing. In the Ukrainian reality, this issue requires serious analytical research and relevant conclusions.

The data in table 4 is used to estimate the financial capacity of the united communities of Ukraine. It should be noted that the above information only partially reflects the real state of budget subsidies, as statistical base and information on newly created territorial communities do not exist at the end of 2020 and their financial indicators due to lack of relevant targeted state subvention and their economic activity in the new borders.

Table 5: Incomes of the united territorial communities of Ukraine, 2020

<i>The criteria for grouping communities</i>	<i>The number of UTCs in the group</i>	<i>The average amount of own income received by 1 UTC of the corresponding group, UAH million</i>	<i>Average income per capita in the corresponding UTC group, UAH</i>	<i>The highest indicator of budget subsidy by group, %</i>
Population over 15 thousand people	110.0	95.9	4,453.7	54.4
Population from 10 to 15 thousand people	134.0	55.9	4,600.1	61.5
Population from 5 to 10 thousand people	77.0	32.8	4,669.3	64.0
Population up to 5 thousand people	110.0	16.7	4,888.4	60.6
UTC - cities of regional significance	23.0	505.7	6,412.6	22.0

Source: Ventsel, Gerasymchuk and Onyschuk (2021)

These data indicate that the highest rates of profitability and the lowest level of budget subsidies are formed by those communities that are created around cities of regional importance. In worst prospects are those having a population of less than 10,000. These groups are characterized by a high rate of budget subsidies (more than 60%), as well as low average income per community. This situation can lead to a deepening financial crisis and a reduction in number of basic social programs and services in the local community, which will determine the impossibility of its existence in the future. A research by Ivanyshyn, Pecheniuk and Pecheniuk (2019) described a similar negative situation in the field of education in terms of obtaining an educational subvention for these purposes. Undoubtedly,

decentralization reform in Ukraine creates new challenges and opportunities for communities. In practical terms, there is a chance to obtain significant income from their own physical assets through strategic management of the sale, lease and acquisition of land and property by using land valuation tools.

Modern decentralization processes are accompanied by heated discussions on the feasibility of acquiring the status of a legal entity under public law by territorial communities of Ukraine. World experience shows that in European countries, communities have been legal entities for hundreds of years, and in the countries of the so-called Eastern bloc, such a reform took place after the overthrow of totalitarian regimes. Sometimes legal entities are not only territorial communities, but also all levels of their management. Upon registration, the community-legal entity receives the right to enter into agreements with individuals and legal entities, can obtain full credit ratings for loans and credits. In this case, the property, that the community has, belongs directly to the community - a legal entity. At the same time, the legal entity community is becoming the only centre of responsibility (Hurin, 2020).

Debt financing can expand infrastructure and facilitate community development. In the context of this study, it is worth considering the issue of maximum use of local assets by local governments. One of the important sources of replenishment of the local budget is the sale or lease of land or buildings. Given the growing demand for land resources and the limited limitations of the latter, administrations may resort to the conversion of agricultural land to urban use¹, which increases the value of urban land, respectively, the price of rent and sale, resulting in additional funding. However, the practice of local governments in Ukraine shows that municipal administrations often do not have an accurate idea of their ownership and value of assets. According to the Resolution of the Cabinet of Ministers of Ukraine² (Resolution, 2020), in pursuance of the Presidential Decree (Decree of the President of Ukraine, 2020), a mechanism of full transfer of agricultural lands to all united territorial communities was introduced. According to the document, more than 2 million hectares of agricultural land will be transferred to local governments. This will allow to develop registers of property holdings and to establish the market value of important land plots, to make strategic decisions on better development of land resources, and to take into account their financial contribution.

The second aspect is how municipal governments can effectively issue debt. Undoubtedly, bank loans and bonds are common debt instruments that have been tested in developed countries, but municipal governments in developing countries face significant problems due to weak fiscal base, low debt capacity, lack of experience in preparing investment plans, payments debt obligations. In Ukraine, it has traditionally been the case that most communities rely on the central government. This was facilitated by public policy, in which a significant part of the funds was distributed centrally through transfers and subsidies to finance investment needs. The practice of local governments considers these resources to be insufficient to provide financing for long-term investments.

In case of the financial analysis that determines the need for borrowing, lending options may be considered: bank loans or bond issues. Other ways could be grants or public-private partnerships. Some countries (Colombia, Mexico, Czech Republic) have developed segmented markets, where the smallest cities have the right to borrow from subsidized government agencies, and medium-sized cities - from commercial banks and bond markets. In addition, Municipal Development Funds can be established as specific financial intermediaries to assist cities in capital planning, financial structuring and project evaluation.

Brus (2017) highlights the main features of the Ukrainian municipal bond market, which includes high budget centralization that makes the local borrowing risky and illiquid, unsystematic entry into the market of municipal loans, insignificant volumes of trading in the stock market, the complexity of the procedure for entering both domestic and foreign markets for borrowed resources. However, the Ukrainian authorities are also taking some steps to improve the use of municipal bonds as possible collateral for loans. In particular, the National Bank of Ukraine (2020) extended the terms of refinancing of banks and the list of acceptable collateral, which includes municipal bonds. Their inclusion is aimed at expanding the tools of banks to regulate their own liquidity. It will also contribute to the development of regional infrastructure projects, which should have a positive impact on the securities market in general.

¹ This has negative impact from sustainable development point of view. World over, the urbanization is seen as negative phenomenon, particularly when it is changing land use from agriculture to concrete built areas. However, we present this solution in the theoretical context of replenishment of local budgets.

² <https://www.kmu.gov.ua/npas/deyaki-zahodi-shchodo-priskorennya-reform-u-sferi-zemelnih-vidnosin-i161120-1113>

4. CONCLUSION

World economic opinion has developed a number of mechanisms through which municipalities can provide financial investment and accumulate additional funds for infrastructure and social projects. One of them is the issue of municipal bonds. The experience of their application in the financial markets of different countries is quite wide and contradictory. For countries that traditionally have high development rates and effective municipal management, the use of bonds is characterized by positive effects. The use of this type of securities in countries with economies in transition has been accompanied by a number of municipal defaults, which has led to the accumulation of debt by the governments of these States.

At this stage of development of Ukrainian territorial communities, this form of attracting financial resources is used insufficiently and inefficiently compared to developed industrial countries. In addition, imperfect legislation, lack of experience in local borrowing, lack of recognition and registration of local governments as legal entities under public law, lack of clear information on available resources and their valuation, create significant risks to the implementation of local borrowing in Ukraine. Areas of recommended further research include the development of mechanisms for effective property management of territorial communities and finding the optimal concept of financing projects for economic and social development of regions, taking into account the best world practices of using municipal bonds.

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AUTHORS' DECLARATIONS AND ESSENTIAL ETHICAL COMPLIANCES

Authors' Contributions (in accordance with ICMJE criteria for authorship)

<i>Contribution</i>	<i>Author 1</i>	<i>Author 2</i>
Conceived and designed the research or analysis	Yes	Yes
Collected the data	No	Yes
Contributed to data analysis & interpretation	Yes	No
Wrote the article/paper	Yes	Yes
Critical revision of the article/paper	Yes	No
Editing of the article/paper	No	Yes
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